

To: Ruhl, Christopher[Ruhl.Christopher@epa.gov]
Cc: Weigel, Greg[Weigel.Greg@epa.gov]; Newhart, Gary[Newhart.Gary@epa.gov]; Ostrander, David[Ostrander.David@epa.gov]
From: Matlock, Dennis
Sent: Thur 8/27/2015 9:09:23 PM
Subject: Re: DRAFT Cost Estimate for River Water Upset - Early Warning sensors

Roger...

From: Ruhl, Christopher
Sent: Thursday, August 27, 2015 5:08 PM
To: Matlock, Dennis
Cc: Weigel, Greg; Newhart, Gary; Ostrander, David
Subject: Re: DRAFT Cost Estimate for River Water Upset - Early Warning sensors

Maybe we can have a discussions at the end of the day after the ICP call.

Sent from my iPhone

On Aug 27, 2015, at 3:06 PM, Matlock, Dennis <Matlock.Dennis@epa.gov> wrote:

Chris fyi

please share with Dave.

just give me a time frame tomorrow (earlier the better)

ERT Gary demobes by noon. He is most familiar with actual components to system.

thx

dennis

From: Newhart, Gary
Sent: Thursday, August 27, 2015 4:05 PM
To: Matlock, Dennis
Cc: Newhart, Gary
Subject: DRAFT Cost Estimate for River Water Upset - Early Warning sensors

From: Newhart, Gary
Sent: Thursday, August 27, 2015 3:49 PM
To: Matlock, Dennis
Cc: Newhart, Gary
Subject: Cost Estimate for River Water Upset - Early Warning sensors

Attached is a cost estimate for eight (8) early warning, non-contact real-time reporting, stream flow river level stations, to be installed along the upper Animas River at locations above and extending below the mine water release site. These stations will be connected to cellular or satellite communications links in order to provide real time information on rapid rises in river levels along critical reaches and tributaries to the Animas River.

One Teledyne ISCO model 6712 Full-Size Portable Water Sampler was also included in the estimate, to be stationed at one of the hydraulically up-gradient river water monitoring stations. This sampler would be equipped with a pH probe, which would act as a trigger of an early warning message to collect Animas River water downstream to evaluate the concentration of contaminants in the river water.

Labor (including travel) to install these units and the water sampler has been estimated by Dave Gochis of the Research Applications Laboratory, National Center for Atmospheric Research, Boulder, Colorado USA, including overhead and indirect costs is estimated to be \$40,000.

Therefore the cost of the equipment, estimated to be \$180,000.00, plus the cost for installation, estimated to be \$40,000 is equal to approximately \$220,000.00.

<Early Warning Stations.odt>